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Remarks

Claims 1-29 are pending.

The Examiner repeated substantially his previous rejection of Claim 1-2, 4-16 and 19-22 in the Office Action of December 20, 2005 ("Previous Office Action") under 35 U.S.C. § 103(a) as being unpatentable over the disclosed prior art ("Disclosed Prior Art") at Applicant's Specification, at page 1, line 15 to page 2, line 21, in view of *Expert System for Experts* ("Parsaye"). With respect to Claim 1, the Examiner states:

Regarding Claims 1-2, Disclosed Prior Art discloses, a method for pricing financial transactions (products), said method comprising:

- Creating a plurality of price tables (fee arrangements – see p. 2, lines 1-7);
- A plurality of product rules (product designation "Fee arrangements can take many shapes, e.g., by product... see p. 2, lines 1-7) each applicable to one or more of said financial transactions (products), wherein each of said product rules (product designation) is linked to one of said price tables (fee arrangements). (see p.2, lines 1-21) and
- For each one of said financial transactions (products). (see p.2, lines 1-21);
- Identifying an applicable one of said product rules...
- Pricing said transaction...
- Wherein said price table (fee arrangement) comprises a billing (calculation of fees) methods (see p. 2, lines 1-21)

Disclosed Prior Art does not teach in a data processing system, a method for pricing financial transactions, said method comprising:

- Creating, in a database system of the data

processing system, a plurality of price tables; and

- Creating, in a database system, a plurality of product rules each applicable to one or more of said financial transactions, wherein each of said product rules is linked to one of said price tables.

Disclosed Prior Art does not teach that the utilization of price tables (fee arrangements) is automated. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have automated the method, since it has been held that broadly providing a mechanical or automatic means to replace manual activity that accomplishes the same result involves only routine skill in the art. *In re Venner*, 120 USPQ 192.

Storage of information in a database and the use of a rule-based system/method for retrieval and filtering of said information is old and well-known in the art of computer system designs and expert system design, as evidenced by Parsaye (see pp. 35-60 and 195-211). It would have been obvious to one skilled in the art at the time the invention was made to have modified Disclosed Prior Art by incorporating a database storage capacity and a rule-based system/method for retrieval, as disclosed by Parsaye, to allow for the use of an expert system to automate the retrieval and application of data, such as pricing, efficiently and quickly.

Applicant respectfully traverses the Examiner's rejection. As pointed out in Applicant's Amendment of February 27, 2006 ("Previous Amendment"), Claim 1 recites:

1. In a data processing system, a method for pricing financial transactions, said method comprising:

creating, in a database system of the data processing system, a plurality of price tables;

creating, in the database system, a plurality of product rules each applicable to one or more of said financial transactions, wherein each of said product rules is linked to one of said price tables; and

for each one of said financial transactions:

identifying an applicable one of said product rules for said transaction; and

pricing said transaction according to the price table linked to said identified applicable product rule.

Therefore, as recited in Claim 1, and explained in Applicant's specification, at page 4, lines 1-31, and at page 30, lines 24-37, "product rules" and "price tables" are interacting entities of a database system. In this instance, Claim 1 further recites that the product rules and the price tables are linked. Contrary to the Examiner's assertion, the disclosure in Applicant's Specification (at page 1, line 15 to page 2, line 21), which the Examiner characterized as "Disclosed Prior Art," neither discloses nor suggests product rules or price tables. In fact, that portion of Applicant's Specification does not disclose the operations of a database system, but relates only generally the fee arrangements and the competitive environment associated with financial services:

Furthermore, fee arrangements change in value and structure in response to competitive situations. Fee arrangements can take many shapes, e.g., by product; by time of submission; by specified execution time; by window of time between submission and execution; by transaction value; by pre-assigned payment slots; and/or by some combination of these. In addition, customers are mobile and shop for the best deals. The methods of payment, timings of payment, cash management practices and credit requirements change. Also, competitors pricing strategies change. In response to these changes, FSCs need the ability to calculate pricing accordingly.

Therefore, FSCs not only need to be able to accurately measure the internal economics of the delivery of each product, the margin, the value of the customer relationship overall, and how those measures are changing. The FSCs also need the flexibility to perform relationship pricing by product or across products, taking special arrangements into consideration. In the same time, the FSCs need an infrastructure to keep up with the ever-changing market demands.

In other words, the "Disclosed Prior Art" do not even relate to a relational database system. As interacting product rules and price tables are not described in the disclosure above, the Examiner's statement that Applicant's Claim 1 is mechanical or automation of

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manual activities is not supported. Further, a general reference to "rule-based system/method for retrieval and filtering of ... information" does not disclose or suggest the specific recitation of product rule entities and price tables of a database system, as recited in Claim 1. Since the portion of Applicant's disclosure that the Examiner relied does not disclose the database entities of price tables and product rules recited in Claim 1, the combined teachings of Applicant's disclosure and Parsaye simply do not meet Claim 1's limitations. Consequently, in the Previous Amendment, Applicant concludes that Claim 1 and its dependent Claims 2, 4-15 and 19-22 are each allowable over the combined teachings of Applicant's disclosure at page 1, line 15 to page 2, line 21, and Parsaye.

In response to Applicants' arguments in the Previous Amendment, the Examiner states in the Present Amendment, in pertinent parts:

* * *

Applicant contends that Disclosed Prior Art does not disclose nor suggest product rules nor price tables, nor that such elements are linked. Examiner respectfully disagrees and asserts that Disclosed Prior Art does disclose price tables ("fee arrangements") wherein each price table ("fee arrangement") is referenced and/or linked to a product rule (a product designation as communicated by phrase "fee arrangements can take many shapes, e.g., by product").

Applicant contends that the Disclosed Prior Art "relates only generally [to] the fee arrangements". (see applicant's arguments, p. 9). Examiner agrees with applicant's contention. However, the claim limitations can be found within the Disclosed Prior Art's general discussion of fee arrangements, nonetheless.

Applicant contends that Claim 1 claims that "product rules" and "price tables" are interacting entities of a database system" and that Disclosed Prior Art "does not disclose the operations of a database system." (see applicant's arguments, p. 9). Examiner agrees. However, "one cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references." *In re*

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Keller, Terry, and Davies, 208 USPQ 871, 882 (CCPA 1981). Additional cited referenced references, Parsaye and Hender, are utilized for that purpose.

The Parsaye reference, *Expert Systems for Experts*, is a general textbook concerning the development and structure of expert based systems. Parsaye discloses the storage of information in a database ("a relational database") in order to allow a computerized system to retrieve and/or analyze stored data. (see pp. 203 - 204). Furthermore, Parsaye discloses the organization of information within the database according to "tables" and accessing such information through use of "rules". (see pp. 204 - 210). While Parsaye does not, as the applicant contends, specifically disclose "product rules" nor "price tables," Parsaye does disclose generally applicable technological concepts such as data storage, data analysis and data retrieval, which would have been applicable to any endeavor seeking to utilize data storage, data analysis and data retrieval.

The modification of the Disclosed Prior Art, which discloses price tables ("fee arrangements") linked to product rules ("product"), by incorporation of a computerized system to store and retrieve such information, as disclosed by Parsaye, would have been obvious to one of ordinary skill in the art at the time the invention was made as it "is natural to try and apply the technology of expert systems to these large databases" (see Parsaye, pp. 203 - 204), and in light of the general drive to automate information storage and retrieval which is obvious in view of *In re Venner, 120 USPQ 192*.

Applicant respectfully disagrees with the Examiner. First, the Examiner admitted above that "fee arrangements" discussed in Applicant's Disclosed Prior Art do not relate to operations of a database system. Second, the Examiner also admitted that Claim 1's "price tables" and "product rules" refer to interacting entities in a database system that are not specifically disclosed by Parsaye. Nevertheless, the Examiner links Applicant's "fee arrangements" to Claim 1's "price tables" and "product rules." The Examiner argues that Parsaye provides the teaching to convert a general discussion of "fee arrangements" -- a discussion relating merely to the competitive conditions in the financial industry -- to specific database entities "price tables" and "product rules." The Examiner based his contentions on

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(1) "Parsaye discloses the organization of information within the database according to 'tables'" and (2) "Parsaye does disclose generally applicable technological concepts such as data storage, data analysis and data retrieval, which would have been applicable to any endeavor seeking to utilize data storage, data analysis and data retrieval."

The Examiner's arguments ignore the fact that, in Parsaye, the term "table" is a term that Parsaye has defined to have the specific meaning of "a relation in a relational data model". In the first paragraph of section 5.10.1, page 204, Parsaye teaches:

As discussed in Appendix D, the relational data model views the world in terms of *relations* which are essentially tables. We often use the term table, instead of relation. Each entry has a value for each attribute. Each table has a *schema* which lists its *attributes* or *fields*. The relation, or table, is obtained by providing instances, entries or *records* for the schema. Further, each entry or record has a record number which uniquely identifies it.

Thus, the "fee arrangements" discussion in Applicants' Disclosed Prior Art cannot suggest any meaningful "price table" entity consistent with Parsaye's definition of a table. Any "price table" that can possibly be suggested by Parsaye would be one that satisfies Parsaye's requirements for a table – i.e., a table that has a "schema," "attributes" and "fields". That is, contrary to the Examiner's contention, such a "price table" cannot be arrived at from a general discussion of "fee arrangements," based on "generally applicable technological concepts such as data storage, data analysis and data retrieval." Teachings that link specific characteristics of the "fee agreements" with the specific structural requirements of a "price table" is required. The Examiner, however, has admitted that such teachings are found in neither Applicant's Disclosed Prior Art nor Parsaye. In other words, the Examiner's attempt to link "fee arrangements" to "price tables" is unjustified and fails in both logic and factual support. Even when one combines Applicant's Disclosed Prior Art and Parsaye using

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impermissible hindsight, the combined teachings would not suggest to those skilled in the art the "price tables" or "product rules" recited in Applicant's Claim 1. Accordingly, Applicant submits that Claims 1-2, 4-16 and 19-22 are allowable. Reconsideration and allowance 1-2, 4-15 and 19-22 are therefore requested.

The Examiner also repeated the rejection of Claims 3, 17-18 and 23-29 in the Previous Office Action under 35 U.S.C. § 103(a) as being unpatentable over Disclosed Prior Art and Parsaye, as the Examiner construed under Claim 1, and in further view of Hendler (Hendler, James A., *Expert Systems: The User Interface*, Albex Publishing Corporation, Norwood, N.J. 1988, pp. 31, 46-47, 113 and 133). With respect to Claim 3, the Examiner states:

Hendler discloses a method wherein each of said product rules (rules) comprise:

- A name of said product rule (rule) ...
- A status of said product rule...
- Display only information. (Rule accesses knowledge base and retrieved information is "selectively displayed as desired by the knowledge base author or eventual users by using the DISPLAY command...

It would have been obvious to one with ordinary skill in the art at the time the invention was made to have modified Disclosed Prior Art and Parsaye by incorporating a linkage between the product rule and stored data, as disclosed by parsaye, and naming the product rule, providing a status of the product rule and assigning display only information, as disclosed by Hendler, to incorporate and utilize standard conventions and procedures commonly utilized for rule-based expert systems.

Applicant respectfully traverses the Examiner's rejection. In the Previous Amendment, and as discussed above, the combined teachings of Applicant's Disclosed Prior Art and Parsaye neither disclose nor suggest the "product rules" and "price tables" entities

recited in Applicant's Claim 1. Further, contrary to the Examiner's contention, Hendler also neither discloses nor suggests "product rules" recited in Applicant's Claim 1. Hendler discloses merely general concepts of a rule-based system. Hendler does not disclose or suggest pricing a financial transaction, as recited in Claim 1. As Claims 3, 17 and 18 each depend from Claim 1, these claims are therefore allowable over the combined teachings of "Disclosed Prior Art," Parsaye, and Hendler. Similarly, Claims 23-29, each also reciting "price tables" and "product rules" entities of a database system, are therefore also allowable over the combined teachings of "Disclosed Prior Art," Parsaye, and Hendler.

In response to Applicant's arguments in the Previous Amendment, the Examiner states:

The Hendler reference, *Expert Systems: The User Interface*, is another general textbook concerning the development and structure of expert based systems. Hendler was utilized to account for claim limitations that are standard concepts in expert systems, such as product rule naming (see p. 113), product rule status (p. 133) and display information (see pp. 46 - 47).

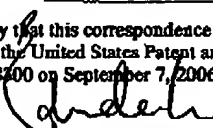
It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Disclosed Prior Art and Parsaye by incorporating standard conventions and procedures commonly utilized in rule based expert systems, as disclosed by Hendler, as such conventions and procedures are commonly utilized in rule-based expert systems.

As the Examiner also relies on "standard conventions and procedures commonly utilized in rule based expert systems" to modify a general discussion of "fee arrangements" to specific database entities "price tables" and "product rules, for the reasons already stated above with respect to Claim 1, the combined teachings of Applicant's Disclosed Prior Art, Parsaye and Hendler do not disclose or suggest the "price tables" and "product rules" recited in Claims 3, 17-18 and 23-29. Accordingly, Applicant submits that Claims 3, 17-18 and 23-

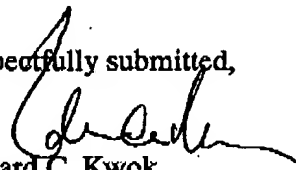
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29 are allowable over these teachings. Reconsideration and allowance of Claims 3, 17-18 and 23-29 are therefore requested.

For the foregoing reasons, Applicant respectfully submits that all pending claims (i.e., Claims 1-29) are allowable. If the Examiner has any questions regarding the above, the Examiner is respectfully requested to telephone the undersigned Attorney for Applicant at 408-392-9250.

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